Claims:

1. A device for producing mechanical vibrations in response to an electrical signal, comprising

a piezoelectric component having two opposing surfaces, said piezoelectric component further having at least two points where polarity is recognized; and wherein a dampening material of low elastic modulus substantially covers at least one surface of the piezoelectric component.

2. The device according to claim 1, wherein the piezoelectric component comprises a unimorph piezoelectric structure having one piezoceramic wafer bonded between two metallic support layers.

3. The device according to claim 1, wherein the piezoelectric component comprises a bimorph piezoelectric structure having two piezoceramic wafers, each piezoceramic wafer being bonded to a different surface of a metallic support layer.

4. The device according to claim 1 wherein at least one acoustic member is attached to one of the surfaces of the piezoelectric component.

5. The device according to claim 1 wherein the piezoelectric component has a T-shaped planform that comprises a neck region extending from one side of the piezoelectric component.

6. The device according to claim 5 further comprising a clamp, connected at the neck region of the piezoelectric component, for coupling the piezoelectric component to a base.

7. The device according to claim 1 wherein the piezoelectric component is coupled to a base in a cantilever fashion.

8. The device according to claim 1 further comprising means, positioned at one end of the piezoelectric component, for adjustably connecting the piezoelectric component to a base surface.

9. The device according to claim 4 wherein at least one acoustic member comprises a surrounding wall portion having a bottom surface and a top surface, the surrounding wall portion extending along a direction substantially perpendicular from the bottom surface to the top surface, the bottom surface being operatively connected to the piezoelectric component.

10. The device according to claim 4 wherein at least one acoustic member further comprises an end portion, operatively connected to the top surface of the surrounding wall portion, to form an enclosed chamber within the acoustic member when the bottom surface of the acoustic member is connected to the piezoelectric component.

11. The device according to claim 4 wherein the end portion has an orifice to form a passageway through the end portion to the chamber.

12. The device according to claim 1 wherein the mechanical vibrations are of sufficient force to produce audible sound over substantially the entire audible frequency range.

13. The device according to claim 1 wherein the mechanical vibrations are of sufficient force as to be readily felt by a holder of the device.

14. The device according to claim 1 wherein the mechanical vibrations are of sufficient force as to produce an audible alerting signal, a tactile alerting signal, and audible sound over substantially the entire audible frequency range.

15. The device according to claim 1, wherein the point of attachment of at least one acoustic member is approximately at an anti-node of the piezoelectric component.

16. A device for producing mechanical vibrations in response to an electrical signal, comprising

a piezoelectric component having two opposing surfaces, said piezoelectric component further having at least two points where polarity is recognized; and

wherein the piezoelectric component has a T-shaped planform that comprises a neck region extending from one side of the piezoelectric component.

17. A device for producing mechanical vibrations in response to an electrical signal, comprising

a piezoelectric component having two opposing surfaces, said piezoelectric component further having at least two points where polarity is recognized; and

wherein a dampening material of low elastic modulus substantially covers at least one surface of the piezoelectric component.